Remarks

Applicants appreciate the Examiner's indication that claims 8-21, 30, 31, 33, and 35 are allowed and that claims 3 and 24 are directed to allowable subject matter. Additionally, in the Final Office Action of July 12, 2005, the Examiner rejected claims 1, 2, 5-7, 22, 23, and 26-29 under 35 U.S.C. § 103(a) based on U.S. Patent No. 6,667,993 to Lippett et al. (Lippett) in view of U.S. Patent No. 6,680,970 to Mejia (Mejia).

Claims 1-3, 5-7, 8-24, 26-31, 33, and 35 are currently pending.

Regarding the rejection of independent claim 1 under 35 U.S.C. § 103(a) based on Lippett and Mejia, the Examiner contends that Lippett discloses many of the features recited in this claim, but concedes that Lippett "does not explicitly teach using a clock signal having a phase determined based on edges in the serialized data that occur at least once every other cycle of the clock signal." (Office Action, page 2). For this feature, the Examiner relies on Mejia. (Office Action, pages 2 and 3).

Claim 1 is directed to a communication method that includes receiving data from a first plurality of data lines, each data line providing data at a predetermined rate; serializing the received data; providing the serialized data over a link; deserializing the serialized data to create deserialized data using a clock signal having a phase determined based on edges in the serialized data that occur at least once every other cycle of the clock signal; and providing the deserialized data to a second plurality of data lines corresponding to the first plurality of data lines.

Applicants respectfully disagree with the rejection of claim 1 under 35 U.S.C. § 103(a). In particular, Applicants submit that Mejia does not disclose or suggest, as the Examiner contends, deserializing serialized data using a clock signal having a phase determined based on edges in the serialized data that occur at least once every other cycle of the clock signal.

Mejia is directed to statistical methods for data rate detection for multi-speed embedded clock serial receivers. (Mejia, Title). Mejia discloses statistically examining edge characteristics of an incoming data stream. (Mejia, Abstract and column 4, lines 41-61). According to Mejia, the statistical examination of a data is used to identify a signature of the data stream, which is then used to determine the rate of the data stream. (Mejia, Abstract).

Applicants submit that a statistical examination of the edge characteristics of an incoming data stream, as disclosed by Mejia, does not disclose or suggest deserializing serialized data using a clock signal having a phase determined based on edges in the serialized data that occur at least once every other cycle of the clock signal, as recited in claim 1. Mejia does not disclose that the incoming data stream includes edges that occur at least once every other cycle of the clock signal. If anything, Mejia appears to teach away from this feature of the invention, as Mejia's statistical analysis of the data stream appears to contemplate data streams that are not guaranteed to have edges that occur at at least at predetermined intervals, such as once every other cycle of a clock signal.

In rejecting claim 1, the Examiner particularly points to figure 1 and column 5, lines 28-30 of Mejia as allegedly disclosing using a clock signal having

a phase determined based on edges in the serialized data that occur at least once every other cycle of the clock signal. (Office Action, page 3). This section of Mejia states: "The clock signal has been locked to the edges of the data patterns. As can be seen, each data transition for either pattern is coincident with a clock edge." This section of Mejia relates to locking a clock signal to the edges in a data stream, but does not disclose or suggest that the edges in the data stream occur at least once every other cycle of the clock signal. In stark contrast, as shown in figure 1 of Mejia, both the "2X data" and the "1X data" data streams of Mejia contain sections in which no edges occur for two or more clock cycles (see, for example, the "1X" data stream of figure 1, starting at the ninth vertical line and ending at the 15th vertical line).

For at least these reasons, Applicants submit that Mejia does not disclose or suggest the features of claim 1 that the Examiner concedes is not taught by Lippett. Accordingly, even if Mejia was combined with Lippett as the Examiner suggests, the combination would not disclose or suggest each of the features of claim 1 and the rejection of claim 1 should therefore be withdrawn. The rejections of claims 2 and 5-7 based on Lippett and Mejia should also be withdrawn, at least by virtue of the dependency of these claims from claim 1.

Independent claim 22 and its dependent claims 23 and 26-29 also stand rejected based on Mejia and Lippett. Claim 22 is rejected by the Examiner based on rationale similar to that used in rejecting claim 1.

Claim 22 is directed to a communication system including means for receiving data from a first plurality of data lines, each data line providing data at a

predetermined rate. The system of claim 22 further includes means for serializing the received data, a circuit for transmitting the serialized data, and means for generating a clock signal based on the serialized data by synchronizing a phase of the clock signal based on edges in the serialized data that occur at least once every other cycle of the clock signal. Further, the system of claim 22 includes means for deserializing the serialized data using the clock signal to create deserialized data and means for providing the deserialized data to a second plurality of data lines.

Applicants submit that Lippett and Mejia, either alone or in combination, do not disclose or suggest each feature of claim 22. For example, claim 22 recites means for generating a clock signal based on the serialized data by synchronizing a phase of the clock signal based on edges in the serialized data that occur at least once every other cycle of the clock signal. As mentioned previously, Mejia does not disclose serializing data by synchronizing a phase of the clock signal based on edges in the serialized data that occur at least once every other cycle of the clock signal. In fact, Mejia explicitly discloses a data stream in which edges occur less frequently than at least once every other cycle of the clock signal.

For at least these reasons, Applicants submit that Lippett and Mejia, either alone or in combination, do not disclose or suggest each of the features of claim 22. Accordingly, Applicants submit that the rejection of claim 22 is improper and should be withdrawn. The rejections of claims 23 and 26-29, at least by virtue of their dependency on claim 22, are also improper and should be withdrawn.

In view of the foregoing remarks, Applicants respectfully request the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 CFR 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,
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